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OF
TRIGEMINAL NEURALGIA AND TRISMUS
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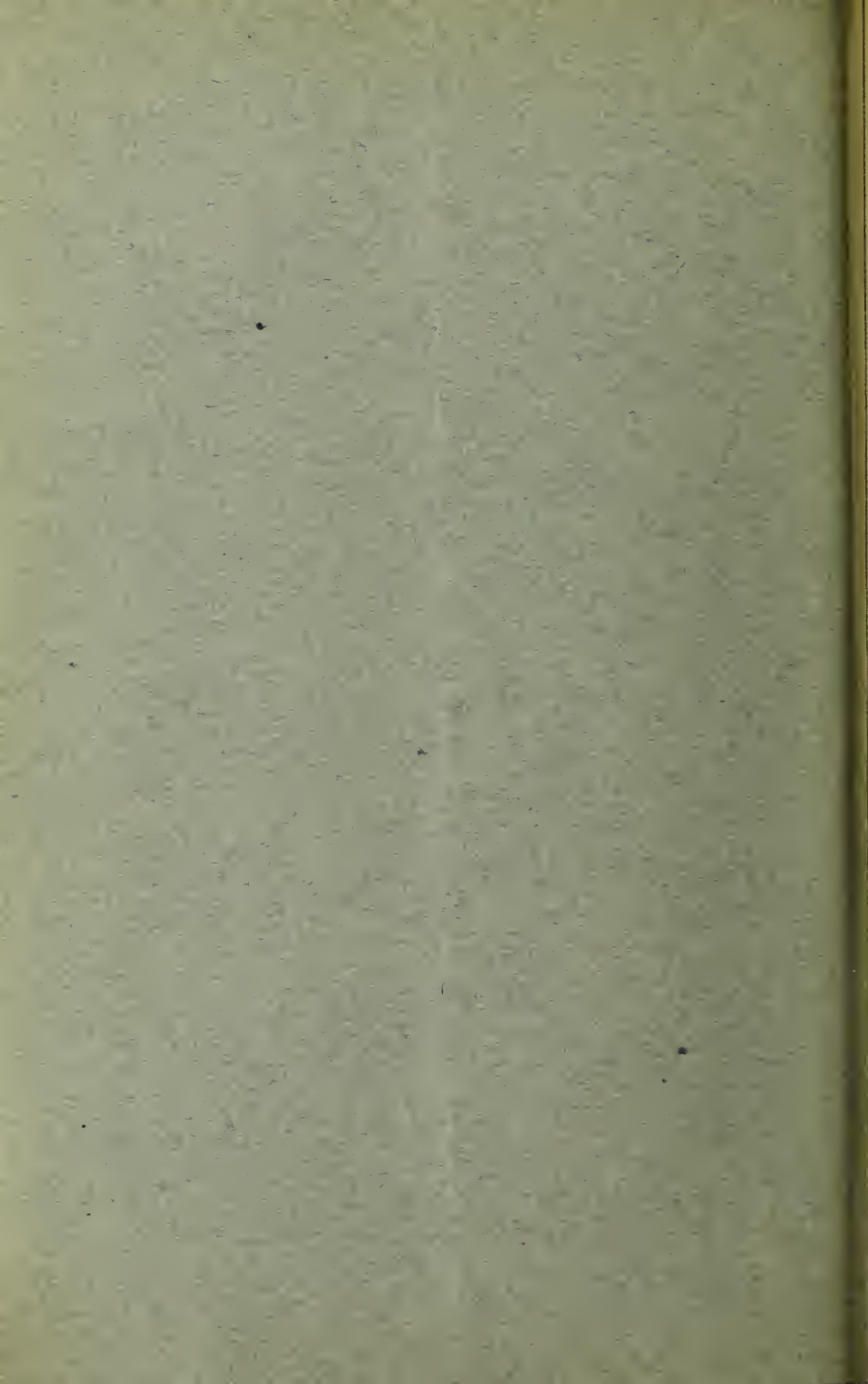
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TWO CASES OF TRIGEMINAL NEURALGIA AND TRISMUS ASSOCIATED WITH LOSS OF TEETH.

Two patients lately under my care have presented some points of interests which it may be worth while shortly to record. Both were suffering from severe facial neuralgia, starting from and radiating about the temporo-maxillary articulation. For the sake of clearness it will be well to consider the general characteristics of both cases.

1. *Deficiency in Number of Teeth.*—Both patients were entirely edentulous as regards the upper jaw, and had but three or four teeth in the incisor region of the lower jaw; of the latter, in one case, one, and in the other, two, were carious, and were extracted by me. I would point out, as an important factor in causation, the absence of grinding teeth in both cases.

2. *The Nature of the Attacks of Pain.*—The pain in both cases was paroxysmal, the patients keeping the mouth closed in order to avoid excitation of pain and spasm. In the patient whose case is first described removal of her artificial teeth had this effect. Attempts at mastication had a like result in Case II, but after wide separation of the jaws, while the patient was anæsthetised for the purpose of examination, as recorded later, the symptoms were materially reduced in intensity, for some days, occurring only under greatly increased stimulation.

3. *The area of the distribution of the pain* in each case presented marked features of similarity. It was partly local, but radiated over the area supplied by the auriculo-temporal nerve, that is to say, over a skin area including the front of the ear and temple, the point of maximum intensity lying in front of the ear along the upper border of the zygomatic process. In one case the pain appeared to be more extensive, though in a minor degree of severity, as it was clearly described as passing down the alveolar margins of both jaws unilaterally. Attention is called to the fact that branches of the auriculo-temporal nerve supply sensory filaments to the temporo-maxillary articulation.

4. *The Condition of Facial Spasm and Trismus.*—This facial spasm was probably of a reflex irritative character, comparable to that seen in other conditions, as, for instance, in tic douloureux, where twitching of the eyelids becomes a marked symptom. It may be noted that the fifth and seventh cranial nerves are intimately associated; their cerebral origins are in close proximity, and communicating branches pass between the nerves themselves and between their

exit from the skull and their termination, where the intercommunication is extensive. The jaw muscles were thrown into tetanic spasm during the attacks of pain, producing a temporary trismus.

5. *The atrophic condition of the masseters and temporal muscles* was due to disuse in both cases, and was so marked as to produce sinking in of the temporal region. This is no uncommon senile condition.

6. *Injection of the conjunctiva and increase of lachrymation* was noted in both cases on the affected side, and is also probably a reflex condition, due to the same causes as that already described above when referring to facial spasm.

7. *Absence of disease of the temporo-maxillary joint* was ascertained under an anæsthetic.

8. *No obvious disease of the teeth, gums, or alveoli* was detected sufficient to account for the symptoms.

CASE I.—A lady of about 60 years of age, looking older, owing probably to her extremely neurotic temperament, was sent to me by Dr. Ferrier. She had suffered for some considerable time—it was impossible to ascertain quite how long—from neuralgia referred generally to the alveolar borders of the jaws, and particularly to the left side of the face and head. On inspection of the mouth it was found that the patient was almost edentulous, having but four remaining teeth, all in the lower jaw (first premolars and the canines of either side). She was wearing dentures which fitted badly. Further investigation elicited the fact that she never voluntarily withdrew more than one of the plates from the mouth, as shortly after removal of both plates spasm of the facial muscles ensued, and violent neuralgic pains, radiating from the temporo-maxillary joint as a focus, occurred. The upper plate was a complete denture bearing incisor, canine, premolar, and molar teeth; the lower similar in character, but having spaces in lieu of teeth where her own remained. It may be mentioned that the necks—the junction of tooth and gum—of these remaining teeth were highly sensitive to mechanical irritation or changes of temperature; the premolars were extensively diseased and required removal. The canines were repeatedly dressed with the solid nitrate of silver, this salt having the property of obtruding sensitive dentine. The result was satisfactory. There was no disease of the articulation or jaw other than that confined to the teeth and already described. The treatment to be immediately described in detail was carried out, the result being eminently satisfactory, the troublesome symptoms being relieved for about the space of two years. A few months ago the patient again came under my observation suffering from a slight relapse. On inquiry and examination it was found that one of her plates had been altered by another practitioner, and this alteration had allowed the jaws to relapse into a condition approximating that in which they were when I first saw her.

CASE II.—The second case was that of an elderly lady sent to me by Dr. Abbott Anderson. She sought his advice some months ago complaining of intense neuralgia, originating in and radiating from the right temporo-maxillary articulation. She was practically edentulous and unable to separate the jaws more than a quarter of an inch without causing severe attacks of neuralgic pain, darting over the whole of the right side of the face and temple, accompanied by spasmodic trismus of the masticatory muscles, injection of the conjunctiva and lachrymation of and from the eye of that side. Various local applications had been tried without more than temporary success, and I saw her in consultation with Dr. Abbott Anderson in order that a thorough examination of the mouth might be made and the existence of dental disease, if any, discovered. There was no obvious physical sign of disease in the joint. Nothing likely to cause neuralgia was found within the mouth, but the patient having for the purpose of examination been anæsthetised and the jaws somewhat forcibly separated, it was found that for some days subsequently her pain was sensibly relieved. I suggested that the case presented so many points of similarity to that I have already described that we could not do better than treat it similarly. The patient had, when I saw her, in her possession two small plates, one for each jaw, but had not lately worn them as they were not comfortable. They were small partial dentures, filling gaps in the front part of the mouth only. In this they contrasted strongly with the dentures in the former case. As in the first case, treatment gave immediate relief to the more urgent symptoms. Practically the neuralgia was cured and the patient enabled to perform the movements of mastication without discomfort or fear of sudden spasmodic pain.

TREATMENT.

The principle in treating these and similar cases is the adaptation of well-fitting dentures so adjusted as to keep at all times the jaws as far as possible in their normal relative position by restoring the normal opposition of molar and bicuspid teeth. The chief difficulty, and one met with at the outset of the treatment, lies in obtaining accurate impressions of the jaws, for in the first case removal of the plates from the mouth set up pain and tonic contractions of the maxillary masticatory muscles; and in the second, the patient, in dread of causing onset of pain, would separate the jaws but to a very small extent, while any attempt to take models of the mouth resulted in causing muscular spasm.

PATHOLOGY.

Loss of grinding teeth, molars and bicuspids, lies at the root of the mischief. Directly consequent upon this loss occur degenerative changes in the masticatory muscles due to inaction; then follows relaxation of ligaments about the joint; the condyle of the jaw, and perhaps the interarticular fibro-cartilage, slips when attempts are made to open the jaws, in this way pressing upon some of the nerve filaments derived from the auriculo-temporal and from the masseteric branch of the inferior maxillary nerves supplying the joint. Indirectly, these nerve filaments are connected with the seventh or facial nerve, the motor nerve of all the muscles of expression to the face. Branches from the auriculo-temporal nerve form one of the principal chains of communication between the fifth and seventh nerves. From the main trunk of the inferior division of the fifth nerve are given off branches to the masticatory muscles and from the ophthalmic division of the same nerve, those supplying the conjunctiva and lachrymal gland. After having been for some time in a state of chronic irritation, the sensory tracts become traversed by exciting stimuli with extreme ease, and consequent discharges of neuralgic pain over the areas supplied by these nerves are frequent and violent.

From the facts which have been mentioned, namely, the conditions which were observed before and after treatment, it may be deduced that the loss of normal relationship existing between the articular surfaces of the temporo-maxillary joint causes in a reflex manner both the paroxysmal pain in the sensory divisions of the fifth nerve and spasm of the muscles of the jaw. Two points favour this hypothesis: first, that the removal of the plates worn by my first patient caused immediate pain, replacement being followed by cessation of symptoms. Secondly, as already detailed, the relief gained by artificial restoration of the grinding teeth in the second case.

I feel more than ever inclined to believe this to be the true explanation, for recently my first case came again under my observation complaining of slight recurrence of all symptoms described. Upon questioning her carefully, I found that her dentist in the country had for some reason altered one of her plates, reducing the molar and bicuspid opposition, and allowing the jaws to relapse into a condition approximating to that in which they were when I first saw her. I have only to add that six months have elapsed since treatment of the second case without the return of any untoward symptoms.

